

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Currently Amended): A lithium ion secondary battery comprising:
a positive electrode capable of absorbing and desorbing lithium ion;
a negative electrode capable of absorbing and desorbing lithium ion;
a porous film interposed between said positive electrode and said negative electrode; and
a non-aqueous electrolyte;

wherein said porous film is adhered to a surface of at least one of said positive electrode and said negative electrode,

said porous film comprises a filler and a resin binder,
a content of said resin binder in said porous film is 1.5 to 8 parts by weight per 100 parts by weight of said filler, and

said resin binder comprises a plurality of resin binders including core-shell type rubber particles and other resin binder, [[and]]

said rubber particles have an adhesive surface portion including at least an acrylonitrile unit, an acrylate unit, or a methacrylate unit,

said other resin binder comprises at least one selected from the group consisting of fluorocarbon resins, cellulose resins, and polyvinyl pyrrolidone, and
the ratio of said core-shell type rubber particles to the total amount of resin binders is 20 to 80 wt. %.

2-4 (Canceled)

5 (Original): The lithium ion secondary battery in accordance with claim 1, wherein said filler comprises a mixture of a large particle group and a small particle group, and an average particle size A of said large particle group and an average particle size B of said small particle group satisfy the formula (1):

$$0.05 \leq B/A \leq 0.25.$$

6 (Canceled)

7 (Original): The lithium ion secondary battery in accordance with claim 1, wherein said filler includes at least Al_2O_3 .

8-13 (Canceled)

14 (Original): The lithium ion secondary battery in accordance with claim 1, wherein said positive electrode and said negative electrode are wound interposing said porous film and a separator.

15 (Canceled)

16 (Currently Amended): [[A]] The lithium ion secondary battery comprising:
— a positive electrode capable of absorbing and desorbing lithium ion;
— a negative electrode capable of absorbing and desorbing lithium ion;
— a porous film interposed between said positive electrode and said negative electrode; and
— a non-aqueous electrolyte;
— wherein said porous film is adhered to a surface of at least one of said positive electrode and said negative electrode;
— said porous film comprises a filler and a resin binder;
— a content of said resin binder in said porous film is 1.5 to 8 parts by weight per 100 parts by weight of said filler;

— said resin binder at least includes an acrylonitrile unit, an acrylate unit, or a methacrylate unit, and

— in accordance with claim 1, wherein an average pore size of micropores in said porous film obtained by a bubble-point method is 0.02 to 0.09 μm .

17 (Canceled)

18 (Previously Presented): The lithium ion secondary battery in accordance with claim 16, wherein said filler includes at least Al_2O_3 .

19 (Canceled)

20 (Previously Presented): The lithium ion secondary battery in accordance with claim 16, wherein said positive electrode and said negative electrode are wound interposing said porous film and a separator.

21 (Currently Amended): [[A]] The lithium ion secondary battery comprising:

— a positive electrode capable of absorbing and desorbing lithium ion;

— a negative electrode capable of absorbing and desorbing lithium ion;

— a porous film interposed between said positive electrode and said negative electrode; and

— a non-aqueous electrolyte;

— wherein said porous film is adhered to a surface of at least one of said positive electrode and said negative electrode;

— said porous film comprises a filler and a resin binder;

— a content of said resin binder in said porous film is 1.5 to 8 parts by weight per 100 parts by weight of said filler;

— said resin binder at least includes an acrylonitrile unit, an acrylate unit, or a methacrylate unit, and

—in accordance with claim 1, wherein an elongating percentage of said porous film is 15% or more.

22 (Previously Presented): The lithium ion secondary battery in accordance with claim 21, wherein said filler comprises a mixture of a large particle group and a small particle group, and an average particle size A of said large particle group and an average particle size B of said small particle group satisfy the formula (1):

$$0.05 \leq B/A \leq 0.25.$$

23 (Canceled)

24 (Previously Presented) The lithium ion secondary battery in accordance with claim 21, wherein said filler includes at least Al_2O_3 .

25 (Canceled)

26 (Previously Presented): The lithium ion secondary battery in accordance with claim 21, wherein said positive electrode and said negative electrode are wound interposing said porous film and a separator.

27 (Currently Amended): [[A]] The lithium ion secondary battery comprising:

—a positive electrode capable of absorbing and desorbing lithium ion;
—a negative electrode capable of absorbing and desorbing lithium ion;
—a porous film interposed between said positive electrode and said negative electrode; and
—a non-aqueous electrolyte;
—wherein said porous film is adhered to a surface of at least one of said positive electrode and said negative electrode;
—said porous film comprises a filler and a resin binder,

— a content of said resin binder in said porous film is 1.5 to 8 parts by weight per 100 parts by weight of said filler, and

— in accordance with claim 1, wherein an amount of said resin binder is smaller in a first surface side where said porous film is in contact with said surface of said electrode, and larger in a second surface side opposite to said first surface side.

28 (Canceled)

29 (Previously Presented): The lithium ion secondary battery in accordance with claim 27, wherein said filler includes at least Al_2O_3 .

30 (Previously Presented): The lithium ion secondary battery in accordance with claim 27, wherein said resin binder has a decomposing temperature of 250 °C or more.

31 (Previously Presented): The lithium ion secondary battery in accordance with claim 30, wherein said resin binder has a crystalline melting point of 250 °C or more.

32 (Previously Presented): The lithium ion secondary battery in accordance with claim 27, wherein said porous film comprises a single film, and an amount of said resin binder gradually increases from said first surface side toward said second surface side.

33-35 (Canceled)

36 (Previously Presented): The lithium ion secondary battery in accordance with claim 27, wherein said positive electrode and said negative electrode are wound interposing said porous film and a separator.

37 (Canceled)